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RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/818,990B

DATE: 07/23/2002 P.6
TIME: 14:52:29

Input Set : A:\LEX-0152-USA SEQLIST.txt

Output Set: N:\CRF3\07232002\I818990B.raw

```

4 <110> APPLICANT: Walke, D. Wade
5     Donoho, Gregory
6     Scoville, John
7     Hilbun, Erin,
8     Zambrowicz, Brian
9     Turner, C. Alexander Jr.
11 <120> TITLE OF INVENTION: Novel Human Proteins and Polynucleotides Encoding the Same
13 <130> FILE REFERENCE: LEX-0152-USA
C--> 15 <140> CURRENT APPLICATION NUMBER: US/09/818,990B
C--> 15 <141> CURRENT FILING DATE: 2001-03-27
15 <150> PRIOR APPLICATION NUMBER: US 60/192,218
16 <151> PRIOR FILING DATE: 2000-03-27
18 <160> NUMBER OF SEQ ID NOS: 28
20 <170> SOFTWARE: FastSEQ for Windows Version 4.0
22 <210> SEQ ID NO: 1
23 <211> LENGTH: 3963
24 <212> TYPE: DNA
25 <213> ORGANISM: homo sapiens
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30 ccttgccatt tcggcagtc ttctggggcc gctgaaggag gcggaggcca agatgacctt      180
31 ccagatcttt cagcctttct gagccaagaa gaattagacg aaagtgtcaa tttggcaaga      240
32 ctggccatca attacgaccc ttgggagaag gcagatgaaa ctcaagctag aaaacgactt      300
33 tctcctgate agatgaaaca ctcacctaat ttaagttttg agcctaactt ctgccaggat      360
34 aaccctcgaa gtcccaccag ctctaaagaa agcccccagg aggcaaaaag gccacagtat      420
35 tgtttctgaa cccagtccaa aaaagtattt ttaaataagg ctgccgactt cattgaagag      480
36 ctatcctccc ttttcaaatc ccacagctcc aaaaggatta gacctcgtgc ctgcaaaaac      540
37 cacaagagta aactggaatc tcaaaacaaa gttatgcagg aaaacagctc cagttttctca      600
38 gatctgtcag aaagacgaga aagatcttct gttcccatcc ctatccctgc ggataccagg      660
39 gataatgaag tgaatcacgc cctggaacag caggaagcca agaggcgtga agcggagcag      720
40 gctgccagtg aggcggctgg tggagacact acaccagggt cttccccttc atctctgtac      780
41 tatgaagaac ctctggggca acctccccgg ttcaactcaa agttacggag cagagaagtt      840
42 ccagaaggaa ctcgagtaca gttggattgc atagtggtag gaattccacc acctcaagta      900
43 aggtggtact gtgaaggcaa ggagcttgaa aattccccag atattcacat cgtccaggca      960
44 ggaaatctgc actcactgac cattgcggaa gcctttgaag aggacacagg acgctattcc      1020
45 tgctttgctt ctaacatcta tgggacagat tcgacttctg ctgagattta tatagaaggg      1080
46 gttttctctt ctgactcaga aggcgaccct aacaaggaa agatgaatcg aatccagaag      1140
47 ccaaattgagg tgtcatctcc tcccactacc tctgcagtca ttccctccagc agtacccecaa      1200
48 gcccagcatt tgggtggcca acctcgtgtg gcaaccatcc agcagtgtca gagccccacc      1260
49 aattacttgc agggattgga tggaaaacct atcattgcag ctccctgtgt tacaaagatg      1320
50 ctacaaaatt tgtcagcttc tgagggtcag ctggttgtct ttgaatgcag agtaaaaagga      1380
51 gctccatctc ctaaggttga gtggtataga gaagggactt taatagaaga ttctccagat      1440

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52 tttaggatttt tacagaaaaa acctcgatcc atggcgagagc cagaggagat ttgcaccttg 1500
53 gtcatttgctg aggtgtttgc agaagattct ggggtgcttca catgtactgc aagcaacaaa 1560
54 tacggcacag tgtcaagcat tgcacagctg cacgtgagag gaaatgagga cctcagcaac 1620
55 aacgggtctc ttcaactcagc caactcyacc accaacctgg cagctattga gccacagccc 1680
56 tccccacccc actcagagcc tccatctgtg gaacaacccc ccaaacccaa actcgagggg 1740
57 gttctggtga accacaatga gccccggtcc agctccagga ttgggcttcg tgtgcacttc 1800
58 aacctgcctg aagatgacaa aggaagtga gcatcctccg aggtggtgt ggtgaccacc 1860
59 agacagacca ggcccgattc tttscaggag aggttcaacg gacaggcaac aaaaacccca 1920
60 gagccttctt tccccgtgaa agagccccct ccagttctgg ccaaacccaa acttgattcc 1980
61 actcagttac aacagcttca taaccaagtc ttactggaac aacaccaatt gcaaaaccca 2040
62 cctccttcat ctctaagga gtttccttcc arcatactg ttttgaactc caatgctccc 2100
63 ccagcggtag caacatccar taagcagggt aaggtcctt catcacagac gttcagcttg 2160
64 gcccggccga agtatttctt cccctccacg aacaccaccg cagcaactgt gggcccttcc 2220
65 agctctccgg tgttcacttt gagcagcact cctcaacta ttcagaggac agtgagcaaa 2280
66 gaaagcctct tagtgtctca cccctctgtg caaaccaaat ctccaggagg gctttccatc 2340
67 caaatgagc cactcccacc agggccaaca gaaccracac caccaccatt cacattttcc 2400
68 atccccagcg gaaaccagtt tcagccccgc tgtgtgtccc caattcctgt ctctcctacc 2460
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70 ccacccacaa atgccatggr gctgcctaga agtgaccat ccattgccatc ccagggatta 2580
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72 aacgcagtga ttcgagactt ggggaaaaaa ataactttca gtgatgtcag accaaaccag 2700
73 caggagtaca aaatttcaag ctttgagcag aggtgatga atgaaataga gtttcgcttg 2760
74 gaacgtactc ctggtgatga atcagatgat gaaattcaac atgatgagat cccacgggc 2820
75 aagtgtattg ctcccatctt tgacaagaga ctcaagcact tccgggtcac agaaggtct 2880
76 ccagtcacat tcacctgcaa aattgttggg atacctgttc caaaggttta ctggttcaaa 2940
77 gatgggaagc agatttctaa gagaaatgag cactgcaaaa tgaggcgaga aggagatggg 3000
78 acatgctctc tgcacattga atccactacc agtgatgacg atggcaacta caccatcatg 3060
79 gcagccaacc cccaggggag aatcagctgt tctggccact tgatggtaca aagtttgccc 3120
80 attcgagtc ggctaacctc tgetggtcag tctcacaggg gaagatcccg agtgcaagaa 3180
81 agagacaaag agccctaca ggaacgttt ttcgaccac atttctgca ggctcctggg 3240
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83 ccccgaggagc tgacatggct actcaatggc caacctgtgc taccagatgc ctcccacaag 3360
84 atgctggtca gggagaccgg agtccactct ctgctcattg acccactcac tcagcgcgac 3420
85 gcagggacct ataagtgcac cgctaccaac aaaaccgggc agaattcttt tagtctggag 3480
86 ctctctgtag tagccaaaga ggtgaagaaa gcacctgtga tcctggagaa actacagaa 3540
87 tgcggtgttc ccgaaggcca ccccgtaga ctggagtgc gcgtgatagg catgccccca 3600
88 cctgtgttct actggaagaa agacaatgag accatccctt gcaccagaga gaggatcagt 3660
89 atgcaccagg acacaacagg gtatgcctgc cttctcattc agccagccaa gaaatcagac 3720
90 gctggatggt acacgttgtc agccaagaat gaagccggca tcgtgtcgtg cactgccagg 3780
91 ctggatatat acgctcagtg gcaccatcag atcccaccgc ccattgtctgt ccggcccagt 3840
92 ggcagtcgct acggatctct caccagtaaa ggacttgaca tattttctgc ctttctctcc 3900
93 atggaaagca cgatggtgta ttcattgctt tctcggagtg tagtggagag tgatgaactt 3960
94 taa 3963

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96 <210> SEQ ID NO: 2

97 <211> LENGTH: 1320

98 <212> TYPE: PRT

99 <213> ORGANISM: homo sapiens

101 <220> FEATURE:

102 <221> NAME/KEY: VARIANT

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```

103 <222> LOCATION: (1)...(1320)
104 <223> OTHER INFORMATION: Xaa = Any Amino Acid
106 <400> SEQUENCE: 2
107 Met Gln Asp Asp Ser Ile Glu Ala Ser Thr Ser Ile Ser Gln Leu Leu
108 1 5 10 15
109 Arg Glu Ser Tyr Leu Ala Glu Thr Arg His Arg Gly Asn Asn Glu Arg
110 20 25 30
111 Ser Arg Ala Glu Pro Ser Ser Asn Pro Cys His Phe Gly Ser Pro Ser
112 35 40 45
113 Gly Ala Ala Glu Gly Gly Gly Gln Asp Asp Leu Pro Asp Leu Ser
114 50 55 60
115 Ala Phe Leu Ser Gln Glu Leu Asp Glu Ser Val Asn Leu Ala Arg
116 65 70 75 80
117 Leu Ala Ile Asn Tyr Asp Pro Leu Glu Lys Ala Asp Glu Thr Gln Ala
118 85 90 95
119 Arg Lys Arg Leu Ser Pro Asp Gln Met Lys His Ser Pro Asn Leu Ser
120 100 105 110
121 Phe Glu Pro Asn Phe Cys Gln Asp Asn Pro Arg Ser Pro Thr Ser Ser
122 115 120 125
123 Lys Glu Ser Pro Gln Glu Ala Lys Arg Pro Gln Tyr Cys Ser Glu Thr
124 130 135 140
125 Gln Ser Lys Lys Val Phe Leu Asn Lys Ala Ala Asp Phe Ile Glu Glu
126 145 150 155 160
127 Leu Ser Ser Leu Phe Lys Ser His Ser Ser Lys Arg Ile Arg Pro Arg
128 165 170 175
129 Ala Cys Lys Asn His Lys Ser Lys Leu Glu Ser Gln Asn Lys Val Met
130 180 185 190
131 Gln Glu Asn Ser Ser Ser Phe Ser Asp Leu Ser Glu Arg Arg Glu Arg
132 195 200 205
133 Ser Ser Val Pro Ile Pro Ile Pro Ala Asp Thr Arg Asp Asn Glu Val
134 210 215 220
135 Asn His Ala Leu Glu Gln Glu Ala Lys Arg Arg Glu Ala Glu Gln
136 225 230 235 240
137 Ala Ala Ser Glu Ala Ala Gly Gly Asp Thr Thr Pro Gly Ser Ser Pro
138 245 250 255
139 Ser Ser Leu Tyr Tyr Glu Glu Pro Leu Gly Gln Pro Pro Arg Phe Thr
140 260 265 270
141 Gln Lys Leu Arg Ser Arg Glu Val Pro Glu Gly Thr Arg Val Gln Leu
142 275 280 285
143 Asp Cys Ile Val Val Gly Ile Pro Pro Pro Gln Val Arg Trp Tyr Cys
144 290 295 300
145 Glu Gly Lys Glu Leu Glu Asn Ser Pro Asp Ile His Ile Val Gln Ala
146 305 310 315 320
147 Gly Asn Leu His Ser Leu Thr Ile Ala Glu Ala Phe Glu Glu Asp Thr
148 325 330 335
149 Gly Arg Tyr Ser Cys Phe Ala Ser Asn Ile Tyr Gly Thr Asp Ser Thr
150 340 345 350
151 Ser Ala Glu Ile Tyr Ile Glu Gly Val Ser Ser Ser Asp Ser Glu Gly
152 355 360 365

```

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```

153 Asp Pro Asn Lys Glu Glu Met Asn Arg Ile Gln Lys Pro Asn Glu Val
154      370      375      380
155 Ser Ser Pro Pro Thr Thr Ser Ala Val Ile Pro Pro Ala Val Pro Gln
156 385      390      395      400
157 Ala Gln His Leu Val Ala Gln Pro Arg Val Ala Thr Ile Gln Gln Cys
158      405      410      415
159 Gln Ser Pro Thr Asn Tyr Leu Gln Gly Leu Asp Gly Lys Pro Ile Ile
160      420      425      430
161 Ala Ala Pro Val Phe Thr Lys Met Leu Gln Asn Leu Ser Ala Ser Glu
162      435      440      445
163 Gly Gln Leu Val Val Phe Glu Cys Arg Val Lys Gly Ala Pro Ser Pro
164      450      455      460
165 Lys Val Glu Trp Tyr Arg Glu Gly Thr Leu Ile Glu Asp Ser Pro Asp
166 465      470      475      480
167 Phe Arg Ile Leu Gln Lys Lys Pro Arg Ser Met Ala Glu Pro Glu Glu
168      485      490      495
169 Ile Cys Thr Leu Val Ile Ala Glu Val Phe Ala Glu Asp Ser Gly Cys
170      500      505      510
171 Phe Thr Cys Thr Ala Ser Asn Lys Tyr Gly Thr Val Ser Ser Ile Ala
172      515      520      525
173 Gln Leu His Val Arg Gly Asn Glu Asp Leu Ser Asn Asn Gly Ser Leu
174      530      535      540
175 His Ser Ala Asn Ser Thr Thr Asn Leu Ala Ala Ile Glu Pro Gln Pro
176 545      550      555      560
177 Ser Pro Pro His Ser Glu Pro Pro Ser Val Glu Gln Pro Pro Lys Pro
178      565      570      575
179 Lys Leu Glu Gly Val Leu Val Asn His Asn Glu Pro Arg Ser Ser Ser
180      580      585      590
181 Arg Ile Gly Leu Arg Val His Phe Asn Leu Pro Glu Asp Asp Lys Gly
182      595      600      605
183 Ser Glu Ala Ser Ser Glu Ala Gly Val Val Thr Thr Arg Gln Thr Arg
184      610      615      620
W--> 185 Pro Asp Ser Xaa Gln Glu Arg Phe Asn Gly Gln Ala Thr Lys Thr Pro
186 625      630      635      640
187 Glu Pro Ser Phe Pro Val Lys Glu Pro Pro Pro Val Leu Ala Lys Pro
188      645      650      655
189 Lys Leu Asp Ser Thr Gln Leu Gln Gln Leu His Asn Gln Val Leu Leu
190      660      665      670
191 Glu Gln His Gln Leu Gln Asn Pro Pro Pro Ser Ser Pro Lys Glu Phe
192      675      680      685
W--> 193 Pro Phe Xaa Met Thr Val Leu Asn Ser Asn Ala Pro Pro Ala Val Thr
194      690      695      700
W--> 195 Thr Ser Xaa Lys Gln Val Lys Ala Pro Ser Ser Gln Thr Phe Ser Leu
196 705      710      715      720
197 Ala Arg Pro Lys Tyr Phe Phe Pro Ser Thr Asn Thr Thr Ala Ala Thr
198      725      730      735
199 Val Ala Pro Ser Ser Ser Pro Val Phe Thr Leu Ser Ser Thr Pro Gln
200      740      745      750
201 Thr Ile Gln Arg Thr Val Ser Lys Glu Ser Leu Leu Val Ser His Pro

```

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```

202          755          760          765
203 Ser Val Gln Thr Lys Ser Pro Gly Gly Leu Ser Ile Gln Asn Glu Pro
204          770          775          780
205 Leu Pro Pro Gly Pro Thr Glu Pro Thr Pro Pro Phe Thr Phe Ser
206 785          790          795          800
207 Ile Pro Ser Gly Asn Gln Phe Gln Pro Arg Cys Val Ser Pro Ile Pro
208          805          810          815
209 Val Ser Pro Thr Ser Arg Ile Gln Asn Pro Val Ala Phe Leu Ser Ser
210          820          825          830
W--> 211 Val Leu Pro Ser Leu Pro Ala Ile Pro Pro Thr Asn Ala Met Xaa Leu
212          835          840          845
213 Pro Arg Ser Ala Pro Ser Met Pro Ser Gln Gly Leu Ala Lys Lys Asn
214          850          855          860
215 Thr Lys Ser Pro Gln Pro Val Asn Asp Asp Asn Ile Arg Glu Thr Lys
216 865          870          875          880
217 Asn Ala Val Ile Arg Asp Leu Gly Lys Lys Ile Thr Phe Ser Asp Val
218          885          890          895
219 Arg Pro Asn Gln Gln Glu Tyr Lys Ile Ser Ser Phe Glu Gln Arg Leu
220          900          905          910
221 Met Asn Glu Ile Glu Phe Arg Leu Glu Arg Thr Pro Val Asp Glu Ser
222          915          920          925
223 Asp Asp Glu Ile Gln His Asp Glu Ile Pro Thr Gly Lys Cys Ile Ala
224          930          935          940
225 Pro Ile Phe Asp Lys Arg Leu Lys His Phe Arg Val Thr Glu Gly Ser
226 945          950          955          960
227 Pro Val Thr Phe Thr Cys Lys Ile Val Gly Ile Pro Val Pro Lys Val
228          965          970          975
229 Tyr Trp Phe Lys Asp Gly Lys Gln Ile Ser Lys Arg Asn Glu His Cys
230          980          985          990
231 Lys Met Arg Arg Glu Gly Asp Gly Thr Cys Ser Leu His Ile Glu Ser
232          995          1000          1005
233 Thr Thr Ser Asp Asp Asp Gly Asn Tyr Thr Ile Met Ala Ala Asn Pro
234          1010          1015          1020
235 Gln Gly Arg Ile Ser Cys Ser Gly His Leu Met Val Gln Ser Leu Pro
236 1025          1030          1035          1040
237 Ile Arg Ser Arg Leu Thr Ser Ala Gly Gln Ser His Arg Gly Arg Ser
238          1045          1050          1055
239 Arg Val Gln Glu Arg Asp Lys Glu Pro Leu Gln Glu Arg Phe Phe Arg
240          1060          1065          1070
241 Pro His Phe Leu Gln Ala Pro Gly Asp Met Val Ala His Glu Gly Arg
242          1075          1080          1085
243 Leu Cys Arg Leu Asp Cys Lys Val Ser Gly Leu Pro Pro Pro Glu Leu
244          1090          1095          1100
245 Thr Trp Leu Leu Asn Gly Gln Pro Val Leu Pro Asp Ala Ser His Lys
246 1105          1110          1115          1120
247 Met Leu Val Arg Glu Thr Gly Val His Ser Leu Leu Ile Asp Pro Leu
248          1125          1130          1135
249 Thr Gln Arg Asp Ala Gly Thr Tyr Lys Cys Ile Ala Thr Asn Lys Thr
250          1140          1145          1150

```

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/09/818,990B

DATE: 07/23/2002
TIME: 14:52:31

Input Set : A:\LEX-0152-USA SEQLIST.txt
Output Set: N:\CRF3\07232002\I818990B.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:2; Xaa Pos. 628,691,707,847
Seq#:14; Xaa Pos. 628,691,707
Seq#:16; Xaa Pos. 353,416,432,572
Seq#:28; Xaa Pos. 353,416,432

VERIFICATION SUMMARY

DATE: 07/23/2002

PATENT APPLICATION: US/09/818,990B

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Input Set : A:\LEX-0152-USA SEQLIST.txt

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L:15 M:270 C: Current Application Number differs, Replaced Current Application No
L:15 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:185 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:624
L:193 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:688
L:195 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:704
L:211 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:832
L:875 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 after pos.:624
L:883 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 after pos.:688
L:885 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 after pos.:704
L:1009 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:352
L:1015 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:400
L:1017 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:416
L:1035 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:560
L:1410 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:352
L:1416 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:400
L:1418 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:416